

1. The optimal alpha value for ridge and Lasso regression, found through cross-validation is typically the value that minimizes the model's error. If you double the alpha value for both Ridge and Lasso, the models will enforce stronger regularization, leading to higher penalty placed on the coefficients, potentially causing more coefficients to approach zero in Lasso and smaller coefficients in Ridge.

2. I would choose Lasso regression due to its ability to perform feature selection by driving coefficients to zero, thus providing a more parsimonious model. Lasso feature selection properly aids in identifying the most relevant predictors, simplifying the model while enhancing interpretability and potentially improving prediction accuracy by focusing on the impactful variables.

3. Given the unavailability of the five most important predictor variables in the incoming data, a new model excluding these variables is necessary. After removal, new five most important predictor variables in the Lasso model might include "Overall Q", "Car Length", "Storage", "Total Brakes" and "Yearbuilt" as they tend to demonstrate a significant influence on target vehicle providing predictive power and essential insights despite the absence of initially identified crucial predictors.

4. Ensure model robustness and generalizability through rigorous validation through techniques like cross-validation, testing against various datasets, and utilizing different sampling methods. A robust model displays consistent performance across diverse datasets, reducing overfitting and enhancing its ability to make accurate predictions on new unseen data. This prioritizes the model's reliability and general applicability, even though it might slightly compromise accuracy on training set.